PATENT Attorney Docket No. SYP-101DV



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S):

Jindal et al.

SERIAL NO.:

FILING DATE:

December 5, 2001

Divison of U.S.S.N. GROUP NO.:

1627

(prior application)

09/267,993

EXAMINER:

B. Celsa

(prior application)

TITLE:

High Speed, Automated, Continuous Flow, Multi-Dimensional

Molecular Selection and Analysis

Box PATENT APPLICATION

U.S. Patent and Trademark Office P.O. Box 2327 Arlington, VA 22202

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the aboveidentified division patent application. Each of the patents and printed publications was submitted in copending predecessor application U.S. Serial No. 09/267,993, filed March 12, 1999. Accordingly, copies of the same are not enclosed in accordance with 37 C.F.R. 1.98(d).

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

(1)	within three (3) months of the filing date of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the date of entry of the national stage as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the first Office action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination under 37 C.F.R. 1.114; or
(2)	after the period defined in (1) but before the mailing date of a final action or a notice of allowance under 37 C.F.R. 1.311, and
	the requisite Statement is below, OR

Respectfully submitted,

Date: December 5, 2001

Reg. No. 41,640

Tel. No.: (617) 248-7012 Fax No.: (617) 248-7100 Michael H. Brodowski
Atty/Agent for Applicant(s)

Testa, Hurwitz, & Thibeault, LLP

High Street Tower 125 High Street

Boston, Massachusetts 02110

SHEET 1 OF 8

FORM PTO - 1449					ATTY DOCKET NO.: SYP-101DV					
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					FILING D.	ATE:	December	5, 2001		C927
			U.	S. PATENT	DOCUME	ENTS				
EXAM.		DOCUMENT						SUB		NG DATE IF
INIT.		NUMBER	DATE	NAME			CLASS	CLASS	APP	ROPRIATE
	AΑ	5,313,061	5/17/94	Drew et al.			250	281		
	AB	5,306,619	4/26/94	Edwards et	al.		435	6		
	AC	5,302,532	4/12/94	Lau			436	528		
	AD	5,288,644	2/22/94	Beavis et a	l.		436	94		
	AE	5,285,064	2/8/94	Willoughby	у		250	288		
	AF	5,281,397	1/25/94	Ligon et al			422	89		
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EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRA ONLY	CT	ENGLISH LANG Y/N
	ВА	WO 94/19694	01-SEP-94	РСТ						
	ВВ	WO 94/14824	07-JUL-94	PCT						
	ВС	WO 94/06017	17-MAR-94	РСТ						
	BD	0 614 989 A1	14.09.94	EPO						
	BE	WO94/15951	7/21/94	PCT						
	BF	WO93/07168	4/15/93	PCT						
	BG	411503	02/6/91	ЕРО						
		. L	OTHER /	ART, JOURI	NAL ARTI	CLES, E	ΓC.			
EXAM. INIT.	ОТН	ER DOCUMENTS	6: (Including A)	uthor, Title, D	ate, Relevant	Pages, Plac	ce of Publica	ition)	·	
	CA	Wiesmüller et al Potent B-Cell an		-				Mouth Dise	ase Cor	ntaining a
	СВ	W. Kopaciewicz Biochemistry, 12	_		or Coupled Mi	ultiple-Colu	mn Separatio	on of Protein	s," Ana	lytical
	CC	Waksman et al., Complexed and	-			•		omain: Crys	tal Struc	ctures of the
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FORM PTO - 1449				ATTY DOCKET NO.: SYP-101DV				
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INFORM	1ATION	N DISCLOSURE	E STATEMENT	Γ	APPLICANT:	JINDAL, et al.		
					SERIAL NO.:	Divisiona 09/267,99		on of U.S.S.N.
					FILING DATE:	Decembe	er 5, 2001	
			U.:	S. PATENT	DOCUMENTS			
EXAM.		DOCUMENT					SUB	FILING DATE IF
INIT.		NUMBER	DATE	NAME		CLASS	CLASS	APPROPRIATE
	AG	5,272,337	12/21/93	Thompson	et al.	250	288	
	AH	5,270,170	12/14/93	Schatz et a	ıl.	435	7.37	
	AI	5,270,163	12/14/93	Gold et al.		435	6	
	AJ	5,266,684	11/30/93	Rutter et a	I.	530	334	
	AK	5,240,616	8/31/93	Kato et al.		210	656	
	AL	5,208,458	5/4/93	Busch et a	I.	250	288	
		• • • • •	OTHER A	RT, JOUR	NAL ARTICLES,	ETC.	<u> </u>	
EXAM. INIT.	ОТН	ER DOCUMENT	S: (Including Au	ithor, Title, D	ate, Relevant Pages, P	lace of Public	ation)	
-	CD		k and Jack W. Szc 1:979-988 (1992)		Selection of Specific I	igand-Bindin	g Nucleic Ac	ids," Angew. Chem.
	CE				erfusion Column HPLC 5(2):236-243 (January 1		e Rapid Map	ping and Sequencing
	CF	Mandana Sassar	ıfar & Jack W. Sze	ostak,"An RN	A Motif that Binds ATP	," Letters To N	Nature, pp. 5.	50-553 (1993).
	CG	1	n and Peter G. Sc ogy, 3:179-190 (1		hod for the Continuous	Purification of	f Proteins by	Affinity Adsorption,"
	СН			•	hopeptides in Comples c Mass Spectrom, 4:710	-	lectrospray L	iquid
	CI				rmination of a Monocle 7:241-247 (1994).	onal Antibody	Binding Acti	vity Using
	Cl	Afeyan et al., "A	Automated Real-Ti	ime Immunoas	say of Biomolecules," /	Nature, 358:60	3-604 (Augu	st 1992).
	CK	Tim Clackson at 1994).	nd James A. Wells	s, " <i>In Vitro</i> Sel	ection From Protein and	l Peptide Libra	aries," Tibtec	h. 12:173-184 (May
	CL	Dan Medynski,	"Synthetic Peptido	2 Combinatoria	al Libraries," Bio/Techn	ology, 12:709-	-710 (July 19	94).
<u>-</u>	CM	1 '	,		ne-Quartet Structure is a atl. Acad. Sci. USA, 91:		tor of Human	Immunodeficiency
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FORM 1	PTO - 14	49			ATTY DOCKET NO.: SYP-101DV			
INFOR	MATION	DISCLOSURE	STATEMEN	Т	APPLICANT:	JINDAL	JINDAL, et al.	
					SERIAL NO.:	Division: 09/267,9		on of U.S.S.N.
					FILING DATE:	Decembe	er 5, 2001	
			U.	S. PATENT	DOCUMENTS			·····
EXAM.		DOCUMENT					SUB	FILING DATE IF
INIT.		NUMBER	DATE	NAME		CLASS	CLASS	APPROPRIATE
	AM	5,175,431	12/29/92	Eisele et al	!.	250	288	
	AN	5,175,430	12/29/92	Enke et al.		250	282	
	AO	5,160,840	11/3/92	Vestal		250	287	
	AP	5,143,852	9/1/92	Valkirs et a	al.	436	501	
	AQ	5,077,195	12/31/91	Blalock et	al.	435	6	
	AR	5,071,909	12/10/91	Pappin et a	ıl.	525	54.1	
	AS	5,045,694	9/3/91	Beavis et a	ıl.	250	287	
			OTHER A	ART, JOUR	NAL ARTICLES,	ETC.		
EXAM. INIT.	отн	ER DOCUMENTS	6: (Including A	ıthor, Title, D	ate, Relevant Pages, P	lace of Public	ation)	
	CN	Marks et al., "Me (August 15, 1992		n of Proteins o	n Filamentous Phage,"	J. of Biologica	ıl Chemistry,	<i>267</i> :16007-16010
	СО	Marks et al., "Hu Bio/Technology,		-	ific for Human Bolld G	roup Antigens	from a Phage	e Display Library,"
	СР	· ·	the Sequence Ve	erification of M	s II: the Use of Matrix- lethylphosphonate Olig			
	CQ	Jamie K. Scott ar	nd Lisa Craig, "R	andom Peptide	Libraries," Analytical	Biotechnology	5:40-48 (19	94).
	CR	Richard A. Houg	thten, "Peptide Li	braries - Criter	ia and Trends," Trends	In Genetics, 9	(7):235-239	(July 1993).
	CS	Günther Jung and Chemin Int. Ed.		-	Multiple Peptide Synthe	sis Methods ar	nd Their App	lications," Angewandte
	CT	Giorgio Fassina, "Oriented Immobilization of Peptide Ligands on Solid Supports," J. of Chromatography, 591:99-106 (1992).						
	CU	Collet et al., "A 89:10026-1003	•	System for Shu	offling Combinatorial A	antibody Librar	ies," <i>Proc.</i> A	'atl. Acad. Sci. USA,
	CV Lam et al., "Rational Design of Potent, Bioavailable, Nonpeptide Cyclic Ureas as HIV Protease Inhibitors," Science. 263:380-384 (January 1994).						hibitors," Science.	
EXAMIN	ER	-			DATE CONSIDER	RED	<u></u>	
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FORM PTO - 1449					ATTY DOCKET NO.: SYP-101DV				
INFORM	IATION	N DISCLOSURE	STATEMEN)T	APPLICANT:	JINDAL	JINDAL, et al.		
		. 5.002000112		`•	SERIAL NO.:	Division	Divisional Application of U.S.S.N. 09/267,993		
					FILING DATE:	Decembe	er 5, 2001		
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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME		CLASS	SUB CLASS	FILING DATE IF APPROPRIATE	
	ΑT	5,015,845	5/14/91	Allen et al.		250	288		
	AU	5,010,175	4/23/91	Rutter et a	l.	530	334		
	AV	5,003,059	3/26/91	Brennan		536	27		
	AW	4,999,493	3/12/91	Allen et al.		250	288		
	AX	4,937,200	6/26/90	Kumazawa	et al.	436	518		
			OTHER	ART, JOURI	NAL ARTICLES,	ЕТС.	** <u>*</u>		
EXAM. INIT.	ОТН	ER DOCUMENTS	S: (Including A	uthor, Title, D	ate, Relevant Pages, I	Place of Public	ation)		
*****	CW	Joly et al., "Dis 686 (February	-	F Receptor Traft	ficking by Mutation of	Its PI-3 Kinase	Binding Sit	es," <i>Science, 263</i> :684-	
	СХ		urification and (:3894-3900 (198		of the Human Platelet	α ₂ -Adrenergic	Receptor,".	J. of Biological	
	CY	Lomasney et al	., "Mammalian o	α ₁ -Adrenergic R	Leceptor," J. of Biologic	cal Chemistry,	<i>261</i> (17):771	0-7716 (1986).	
	CZ	•	ntibody Redesig		filing from Random Co	ombinatorial In	ımunoglobul	in Libraries," <i>Proc.</i>	
•	CA1				e α2-Adrenergic Recep mistry, 261(8):3901-39		ne Nucleotic	le Regulatory Proteins	
-	СВІ	James W. Putn	ey Jr., "Exciteme	ent About Calciu	ım Signaling in Inexcit	able Cells," Sc.	ience, 262:6	76-678 (October 1993).	
	CCI	1	ogrammed Cell I 9 October 1993		ontrol of Cell Survival:	Lessons from	the Nervous	System," Science.	
	CD1		"Structure of the 11 January 1994)		ain of Fibroblast Collaș	genase Comple	xed with an l	nhibitor," Science,	
	CE1		., "Hematopoiet ng." <i>Protein Sci</i>		imilarities and Differer 382 (1993).	nces in the Stru	ctures, with	Implications for	
	CF1		yke, "Software to ication Note, pp		peed of DNA Sequence r 1993).	: Assembly," Se	equencing an	od .	
	CGI		and Robert C. N 2 February 1994;	-	ee-Dimensional Model	ing and Drug D	evelopment,	" Bio/Technology,	
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FORM PTO - 1449					ATTY DOCKET NO.: SYP-101DV			
INFORM	1ATION	DISCLOSURE	STATEMEN	١T	APPLICANT:	JINDAL,		
					SERIAL NO.:		Divisional Application of U.S.S.N. 09/267,993	
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	AY	4,902,891	2/20/90	Vestal		250	281	
	AZ	4,895,809	1/23/90	Schalbach	et al.	436	518	
	AAI	4,883,958	11/28/89	Vestal		250	288	
	ABI	4,879,247	11/7/89	Ohlson		436	527	
	ACI	4,762,617	8/9/88	Stevens		210	635	
	ADI	4,705,616	11/10/87	Andresen	et al.	204	299	
	AE1	4,205,058	5/27/80	Wagner et	al.	424	1	
	AF1	5,340,477	8/23/94	Kauvar		210	198.2	
	AG1	5,252,216	10/12/93	Folena-W	/asserman et al.	210	635	
			OTHER	ART, JOUI	RNAL ARTICLES,	ETC.		
EXAM. INIT.	ОТНЕ	R DOCUMENTS	S: (Including A	uthor, Title, l	Date, Relevant Pages, I	Place of Public	ation)	
	СН1	Dr. Allen K. M 26 (August 199	=	ar Models in E	nzyme Specificity Studi	es," Scientific	Computing d	& Automation®, pp. 23-
	CH		gington, "Neuro y, 11:1237-1241	-	nsduction: Will Control 993).	ling Phosphory	lation Cure	Disease?,"
	C11			•	Preparative Chromatogra paration," <i>Preparative C</i>			.
	CK1	Nigel Beeley, "Peptidomimetics and Small-Molecule Drug Design: Towards Improved Bioavailability and in vivo Stability," <i>Tibtech</i> , 12:213-216 (1994).						
	CL1	Wieslaw M. Kazmierski, "Recent Advances in the Design and Synthesis of Small-Molecule Mimetic Drugs," <i>Tibtech</i> , 12:216-218 (June 1994).						
	CM1 Pieles et al "Matrix-Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry: a Powerful Tool for the Mass and Sequence Analysis of Natural and Modified Oligonucleotides," Nucleic Acids Research, 21(14):3191-3196 (1993).							
	CNI		al., "Bacterioph Technology, 12		isplay of an Immunoglo oruary 1994).	bulin-Binding	Domain of S	taphylococcus Aureus
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FORM P	FORM PTO - 1449			ATTY DOCKET NO.: SYP-101DV			
INFORM	IATION	DISCLOSURE STATEMENT	APPLICANT:	JINDAL, et al.			
			SERIAL NO.:	Divisional Application of U.S.S.N. 09/267,993			
			FILING DATE:	December 5, 2001			
	•	OTHER ART, JOUR	RNAL ARTICLES,	ETC.			
EXAM. INIT.	ОТНЕ	R DOCUMENTS: (Including Author, Title, I	Date, Relevant Pages, I	Place of Publication)			
	COI	Stierandová et al., "Peptide-Encoding for Stru Synthesized and Tested on solid-Phase Suppo		•			
	CP1	Lam et al., "Rational Design of Potent, Bioava 263:380-384 (21 January 1994).	ailable, Nonpeptide Cyc	lic Ureas as HIV Protease Inhibitors," Science.			
	CQI	David G. Alberg and Stuart L. Schreiber, "Strescience, 262:248-250 (8 October 1993).	ucture-Based Design of	a Cyclophilin-Calcineurin Bridging Ligand,"			
	CR1	Robert L. Stevenson, "ISPPP '94," Application	n Note, pp. 41-42 (April	1995).			
	CS1	Songyang et al., "SH2 Domains Recognize Sp	pecific Phosphopeptide	Sequences," <i>Cell</i> , pp. 767-778 (1993).			
	CTI	Susan L. Danheiser, "Structure-Based Small M Genetic Engineering News, p.1, p. 36 (July 19		es as Key Biotech Drug Development Strategy,"			
	CUI	Jenison et al., "High-Resolution Molecular Di	scrimination by RNA,"	Science, 263:1425-1429 (11 March 1994).			
	CV1	Moyle et al. "Co-Evolution of Ligand-Recept	or Pairs," Nature, 368:2	251-255 (17 March 1994).			
	CWI	Peter J. Schatz, "Use of Peptide Libraries to M Residue Consensus Peptide Specifies Biotinyl 1993).	•				
	CX1	Jeffrey W. Jacobs and Stephen P. A. Fodor, "C Synthesis," <i>Tibtech, 12</i> (January 1994).	Combinatorial Chemistr	y-Applications of Light-Directed Chemical			
	CYI	Waksman et al., "Binding of a High Affinity I Complexed and Peptide-Free Forms." Cell. 72		to the Src SH2 Domain: Crystal Structures of the 993).			
	CZI	Chait et al., "Protein Ladder Sequencing," Sci	ience, 262:89-92 (1 Octo	ober 1993).			
	CA2	Furka <i>et al.</i> , "General Method for Rapid Synth 37:487-493 (1991).	nesis of Multicomponen	t peptide Mixtures," Peptide & Protein Research,			
	CB2	Deres et al., "In Vivo Priming of Virus-Specif 342:561-564 (30 November 1989).	ic Cytotoxic T Lympho	cytes with Synthetic Lipopeptide Vaccine," Nature.			
	CC2	Yarovsky et al., "High Performance Liquid Cl Chromatography, 660:75-84 (1994).	hromatography of Amin	o Acids, Peptides and Proteins," J. of			
	CD2	Banner et al., "A Method for Characterization of Endogenous Ligands to Orphan Receptors Belonging to the Steroid Hormone Receptor SuperfamilyIsolation of Progesterone from Pregnancy Plasma Using Progesterone Receptor Ligand-Binding Domain," Analytical Biochemistry, 200:163-170 (1992).					
EXAMIN	ER		DATE CONSIDE	RED			

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FORM F	PTO - 144	9	ATTY DOCKET NO.: SYP-101DV				
INFORM	1ATION	DISCLOSURE STATEMENT	APPLICANT:	JINDAL, et al.			
			SERIAL NO.:	Divisional Application of U.S.S.N. 09/267,993			
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		OTHER ART, JO	DURNAL ARTICLES,	ETC.			
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	CE2	Youngquist et al., "Matrix-Assisted Laser Biologically Active Peptides Isolated From Mass Spectrometry, 8:77-81 (1994).		apid Determination of the Sequences of orial Peptide Libraries," Rapid Communications in			
	CF2	Brooks Shera, "Speed Sorts Molecules," I	nside R & D, 22(35):1-2 (Se	ptember 1, 1993).			
	CG2	Stringham et al., "Selective Non-Adsorpti Phase Selection and Alternative Modes of		hromatography, 1(2):179-193 (1989).			
	CH2	Stefan Stevanovic and Günther Jung, "Multiple Sequence Analysis: Pool Sequencing of Synthetic and Natural Peptid Libraries," <i>Analytical Biochemistry</i> , 212:212-220 (1993).					
	CI2	Steven A. Benner, "Catalysis: Design Ve	rsus Selection," Science, 26	7:1402-1403 (10 September 1993).			
	CJ2	Edward J. Reber and Carl O. Pabo, "Zinc Specificities," <i>Science</i> , 263:671-673 (4 Fe		ction of Fingers with New DNA-Binding			
	CK2	Chaiken, IM, "Analytical Affinity Chromatogr. 376:11-32 (1986).	atography In Studies Of Mo	lecular Recognition In Biology: A Review," J.			
	CL2	Kerr, JM et al., "Identification Of Antiboo Synthetic Peptide Library Affinity Selecti	-	on-Natural Amino Acids By Recombinant And Chem. Lett. 3:463-468 (1993).			
*	CM2	Zuckermann, RN et al., "Identification Of Mixtures Generated By Robotic Synthesis		By Affinity Selection From Equimolar Peptide 34, 89:4505-4509 (1992).			
	CN2	Chen, Z. et al., "Identification Of A Soluk PNAS, 88:8179-8183 (1991).	ole Salicylic Acid-Binding P	rotein That May Function In Signal Transduction,"			
	CO2	Lu et al., "The Identification and Characte J. Biol. Chem., 264(23):13546-13558 (19		ors Involved in HeLa Cell-Substratum Adhesion,"			
	CP2	Houghten et al., "The Use of Synthetic Pe Biotechniques, 13(3): 412-421 (1992).	ptide Combinatorial Librari	es for the Identification of Bioactive Peptides,"			
	CQ2	Houghten, "Soluble Combinatorial Librar A Companion to Methods in Enzymology,		d Repertoire of Chemical Diversity," METHODS:			
	CR2	Janis et al., "Dual-Column Immunoassays (1989).	Using Protein G Affinity C	hromatography," Anal. Chem., 61:1901-1906			
-	CS2	Fassina et al., "Design of hydropathically Peptide. Res., 39:540-548 (1992).	complementary peptides for	Big Endothelin affinity purification," Int. J.			
	CT2			e Study of Copper-II with a High Molecular Weight ct. A, Inorg. Phys. Theor. Anal., 28(9):814-816			

SHEET 8 OF 8

FORM PTO - 1449			ATTY DOCKET NO.: SYP-101DV			
INFORM	INFORMATION DISCLOSURE STATEMENT			JINDAL, et al.		
			SERIAL NO.:	Divisional Application of U.S.S.N. 09/267,993		
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		OTHER ART, JOUR	NAL ARTICLES,	ETC.		
EXAM. INIT.	ОТНЕ	R DOCUMENTS: (Including Author, Title, E	ate, Relevant Pages, I	Place of Publication)		
	CU2 Pawlowski <i>et al.</i> , "Overexpression and mutagenesis of the cDNA for rat liver 3-alphahydroxysteroid/dihydrodioldehydrogenase: Role of cysteines and tyrosines in catalysis," <i>J. of Biol. Chem.</i> , 269:13502-13510 (1994) (Abstract).					
EXAMINER			DATE CONSIDERED			

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